

(No Model.)

H. F. COX.
CLAMP FOR RAIL JOINTS.

No. 371,553.

Patented Oct. 18, 1887.

Fig. 1.

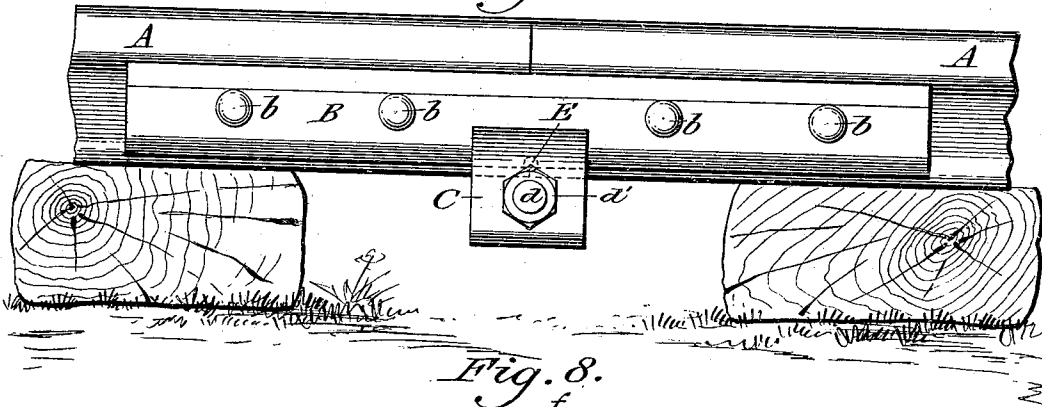


Fig. 8.

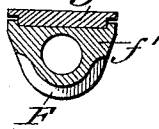


Fig. 2.

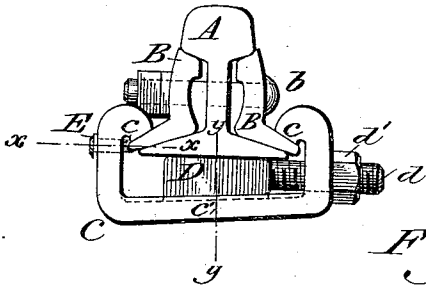


Fig. 7.

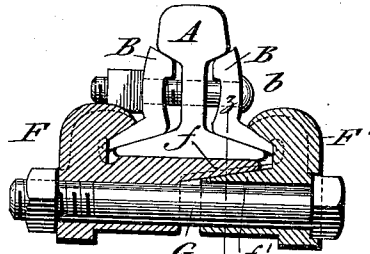


Fig. 9.

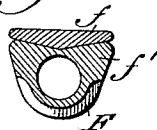


Fig. 4.

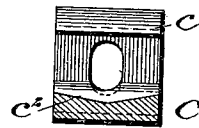


Fig. 3.

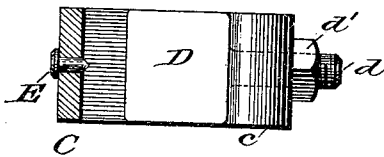


Fig. 5.

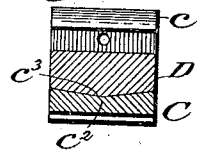


Fig. 6.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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CLAMP FOR RAIL-JOINTS.

SPECIFICATION forming part of Letters Patent No. 371,553, dated October 18, 1887.

Application filed March 16, 1887. Serial No. 231,101. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. COX, of the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Clamps for Rail-Joints, of which the following is a true and exact description, due reference being had to the accompanying drawings, which form a part of this specification.

10 My invention relates to the construction of clamps for securing the abutting ends of railway-rails in vertical alignment; and my object is to improve and simplify the construction of such clamps.

15 Reference being now had to the drawings which illustrate my invention, Figure 1 is a side elevation of a rail-joint having my improved clamp in connection with the ordinary fish-plates. Fig. 2 is a side view of my clamp in place on a joint; Fig. 3, a plan view of my clamp, one jaw being cut away on the line $x x$ of Fig. 2. Fig. 4 is a view of my clamp on the section-line $y y$ of Fig. 2, looking to the right; Fig. 5, a view on the same section, looking to the left. Fig. 6 is a view of a stud which I use with my clamp to secure it in position at the joint. Fig. 7 is a view of another form of clamp, showing the applicability of my wedge-centering device to such clamps. Figs. 8 and 9 show different modifications of the wedge-centering device.

A A are the rails; B B, double-angle fish-plates secured to the rails by bolts b , as usual.

C is my improved clamp, having jaws $c c$ at each end, one jaw being slightly higher than the other, so that when they are both in position upon the rail-base or base-plates of the fish-plates B the bottom c' of the clamp C will lie at an angle to the base of the rail, as shown.

40 D is a wedge-block tapered to correspond with the angle between the rail-base and bottom c' of clamp C, said wedge having a bolt, d , secured to it and passing through a hole or slot in one of the upright arms of the clamp C. A nut, d' , on the outside of the clamp will, as will be at once seen, draw the wedge forward and compress the rail-base between it and the jaws $c c$ of the clamp C.

In this and other devices in which the rail is clamped by means of a wedging action the wedges, being exposed to somewhat irregular strains, have a tendency to get crooked in their bearings upon each other or even to slip out of place. I have provided against this danger by making the two wedge-surfaces of the clamp serve as guides to each other, one being provided with a concave surface of convenient form, and the other being provided with a corresponding convex surface which, engaging with each other, effectually prevent the wedges from moving with respect to each other in any but a single straight line. Thus the upper surface of the inclined part c' of clamp C is made to taper from each side toward the middle, as shown at c'' , Figs. 4 and 5, a corresponding taper being given to the wedge D, as is shown at c'' , Fig. 5. Figs. 8 and 9 show how this provision against lateral slipping or displacement can be applied to wedge-clamps like that shown in Fig. 7, they being sections on a line, $z z$, of such a clamp. The special form of clamp shown in Fig. 7 forms the subject-matter of another application filed by me in the Patent Office, and I therefore make no claim for it in this case.

To prevent the clamp from slipping away from the rail-joint I provide a stud, E, (see Figs. 2 and 6,) this stud having a wedge-joint and being secured in the clamp, so that its wedge edge will come between the two rails, which may be slightly notched to receive it.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In rail-clamps adapted to clamp the ends of adjoining rails between jaws extending over the rail-base and a central bottom support by the action of sliding wedge-surfaces, substantially as specified, the device of providing the wedge surfaces with concave and convex guide-surfaces adapted to register with each other, substantially as shown and described, so that the wedges can only move on each other in one regulated direction.

2. As a new article of manufacture, a rail-clamp consisting of bar C, having jaws $c c$ and inclined connecting-bar c' , and a wedge,

D, having bolt *d* and nut *d'*, whereby the clamp is made to grip the rail base between the jaws and the central bottom support, all substantially as and for the purpose specified.

5 3. As a new article of manufacture, a rail-clamp consisting of a bar or plate, C, having jaws *c c* and inclined connecting-bar *c'*, with curved upper surface, *c²*, and wedge D, hav-

ing a curved lower surface, *c³*, corresponding to the surface of bar *c'*, bolt *d*, and nut *d'*, all substantially as and for the purpose specified. 10

HENRY F. COX.

Witnesses:

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